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January 27, 2015

The Honorable John McCain  
Chairman  
The Honorable Jack Reed  
Ranking Member  
Committee on Armed Services  
United States Senate

*Depot Maintenance: Status of the Public-Private Partnership for Repair of the Dual-Mode Transmitter in the F-16 Fire-Control Radar*

A Department of Defense (DOD) instruction directs that public-private partnerships for depot-level maintenance shall be employed whenever cost-effective in providing improved support to the warfighter, and to maximize the utilization of the government's facilities, equipment, and personnel at DOD depot-level maintenance activities.<sup>1</sup> DOD defines a public-private partnership for depot-level maintenance as a cooperative arrangement between an organic<sup>2</sup> depot-level maintenance activity and one or more private-sector entities to perform DOD or defense-related work or to utilize DOD depot facilities and equipment, or both. In April 2011, officials at Ogden Air Logistics Complex—the complex that repairs some F-16 fighter aircraft components for the U.S. Air Force fleet—projected a declining U.S. workload for maintenance of dual-mode transmitters—a key component of the F-16 fire-control radar. The projected decline from 562 units in 2010 to 356 units in 2015 was based on plans at the time for reductions in the fleet of F-16 aircraft. To bring additional workload into its repair facility at no extra cost to it, the Ogden Air Logistics Complex, in August 2011, entered into an implementation agreement under an existing direct-sale partnership<sup>3</sup> with Lockheed Martin for the repair of certain foreign military sales customers' dual-mode transmitters in their F-16s.

Senate Report 113-176, accompanying S. 2410, a proposed bill for The Carl Levin National Defense Authorization Act for Fiscal Year 2015, mandated that GAO examine the Air Force's public-private partnership program for the repair of the dual-mode transmitter in the F-16 fire-

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<sup>1</sup>Department of Defense Instruction 4151.21, *Public-Private Partnerships for Depot-Level Maintenance* (Apr. 25, 2007). Depot maintenance is an action performed on material or software in the conduct of inspection, repair, overhaul, or the modification or rebuild of end-items, assemblies, subassemblies, and parts, that, among other things, requires extensive industrial facilities, specialized tools and equipment, or uniquely experienced and trained personnel that are not available in lower-echelon-level maintenance activities. Depot maintenance is a function and, as such, is independent of any location or funding source and may be performed in the public or private sectors.

<sup>2</sup>An organic depot-level maintenance activity is a government-owned and government-operated support activity such as an arsenal, ammunition plant, or warfare center.

<sup>3</sup> A direct-sale type of partnership occurs when military and commercial entities enter into an agreement for the sale of depot maintenance services to an outside (nongovernment) entity.

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control radar to determine the cost savings from the program and the feasibility and advisability of other services adopting similar programs.

This report describes (1) the status, including any cost savings, of the Air Force's public-private partnership program for repair of the dual-mode transmitter in the F-16 fire-control radar; and (2) how, if at all, this type of partnership is applicable to the maintenance of fire-control radars for other military services' aircraft. We provided a briefing on our results to your committee staff on December 17, 2014 (see enclosure). This report formally transmits the results of our work in response to the mandate.

To conduct our work, we reviewed previous GAO and DOD Inspector General's reports regarding DOD public-private partnerships to obtain historical data on the various types of partnerships DOD has used. We also reviewed and analyzed DOD policy and guidance on public-private partnerships, the 2008 partnering agreement, and its 2011 implementing agreement for repair of the dual-mode transmitter in the F-16 fire-control radar, and the business-case analysis for the F-16 partnership. To obtain information about the establishment of public-private partnerships for maintenance and repair of the radar in other aircraft, we interviewed officials at the F-16 system program office at the Ogden Air Logistics Complex, Hill Air Force Base, Utah, regarding the F-16 partnership agreement. We also interviewed officials with the F/A-18 program office at the Naval Air Systems Command, Patuxent River, Maryland, and F-15 program office at Wright-Patterson Air Force Base, Dayton, Ohio. Finally, we interviewed a Director from the Office of the Deputy Assistant Secretary of Defense for Maintenance Policy and Programs regarding guidance and policy for establishing partnerships as well as the public-private partnerships for the F-16 and other aircraft.

We conducted our work from August 2014 to January 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary, we found that, according to Ogden Air Logistics Complex officials, the Air Force's public-private partnership between Lockheed Martin and the Ogden Air Logistics Complex has not resulted in repair activity since its implementing agreement was established in August 2011. Therefore, DOD and the Air Force have no cost savings to report. These same officials stated that foreign military sales customers have not yet taken advantage of the partnership because (1) they are loyal to their current repair arrangements, and (2) some countries have lengthy processes for procurement and funding for repairs that discourage them from seeking new repair arrangements under the partnership. However, Ogden Air Logistics Complex officials told us that, in early 2014, two foreign military sales countries expressed interest in utilizing the partnership for repairs, and one of these countries may send workload this fiscal year.

Further, we found that the type of partnership used by the Ogden Air Logistics Complex for repair of the dual-mode transmitter has been used for other services and for other commodities including aircraft radar. DOD has formed direct-sale public-private partnerships for the maintenance of the fire-control radar of at least two other fleets of U.S. aircraft, and according to officials, is considering forming a new partnership for a third type of aircraft. For example, in 2002, the Navy established a public-private partnership for, among other things, repair of an older version of its F/A-18 fire-control radar.

For additional information about the results of our review, please see the enclosed briefing.

## Agency Comments and Our Evaluation

We are not making recommendations in this report. We provided a draft of this report to DOD for review and comment. DOD did not provide written comments to include in this report; however, DOD provided technical comments on a draft of the enclosure that were incorporated as appropriate.

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We are sending copies of this report to the appropriate congressional committees and to the Secretary of Defense. The report is also available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-5431 or [russellc@gao.gov](mailto:russellc@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report include Larry Juneke, Assistant Director; Katie Mauldin; Carol Petersen; Richard Powelson; Michael Silver; Sonja Ware; and Michael Willems.

A handwritten signature in black ink, appearing to read "Cary Russell". The signature is fluid and cursive, with the first name "Cary" written in a larger, more prominent script than the last name "Russell".

Cary Russell  
Director  
Defense Capabilities and Management

Enclosure

Enclosure

**Depot Maintenance: Status of the Public-Private Partnership for Repair of the Dual-Mode Transmitter in the F-16 Fire-Control Radar**



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**Briefing to the Senate Armed Services Committee**

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## Introduction

- Department of Defense (DOD) Instruction 4151.21, Public-Private Partnerships for Depot-Level Maintenance<sup>1</sup> (Apr. 25, 2007), directs that public-private partnerships for depot-level maintenance shall be employed whenever cost-effective in providing improved support to the warfighter, and to maximize the utilization of the government's facilities, equipment, and personnel at DOD depot-level maintenance activities.
- DOD defines a public-private partnership for depot-level maintenance as a cooperative arrangement between an organic<sup>2</sup> depot-level maintenance activity and one or more private-sector entities to perform DOD or defense-related work or to utilize DOD depot facilities and equipment, or both.
- There are three basic types of public-private partnerships:
  - Workshare—government buying entity, in collaboration with a contractor and an organic product support activity, determines the best mix of work, capitalizing on each partner's capabilities.
  - Direct Sale—military and commercial entities enter into an agreement for the sale of depot maintenance services to an outside (nongovernment) entity.
  - Lease—a private-sector entity has access to, and beneficial use of, facilities or equipment that are real or personal government property.

<sup>1</sup>Depot maintenance is an action performed on materiel or software in the conduct of inspection, repair, overhaul, or the modification or rebuild of end-items, assemblies, subassemblies, and parts, that, among other things, requires extensive industrial facilities, specialized tools and equipment, or uniquely experienced and trained personnel that are not available in lower-echelon-level maintenance activities. Depot maintenance is a function and, as such, is independent of any location or funding source and may be performed in the public or private sectors.

<sup>2</sup>An organic depot-level maintenance activity is a government-owned and government-operated support activity such as an arsenal, ammunition plant, or warfare center.



## Introduction (cont.)

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- In April 2011, officials at Ogden Air Logistics Complex—the complex that repairs some F-16 fighter aircraft components for the U.S. Air Force fleet—projected a declining U.S. workload for maintenance of dual-mode transmitters—a key component of the F-16 fire-control radar. The projected decline from 562 units in 2010 to 356 units in 2015 was based on plans at the time for reductions in the fleet of F-16 aircraft.
- In August 2011, the Ogden Air Logistics Complex entered into an implementation agreement under an existing direct-sale partnership with Lockheed Martin for the repair of certain foreign military sales customers' dual-mode transmitters in their F-16s.
  - According to DOD and Ogden Air Logistics Complex officials, this partnership is unique because it is the first time that DOD established a partnering agreement for repair of a component for foreign military sales customers' aircraft.
  - Ogden Air Logistics Complex officials stated that the partnership would bring additional workload beyond its support of the U.S. F-16 fleet into its repair facility at no extra cost to them.



## Objectives

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- Senate Report 113-176, accompanying S. 2410, a proposed bill for the The Carl Levin National Defense Authorization Act for Fiscal Year 2015, mandated that GAO examine the Air Force's public-private partnership program for the repair of the dual-mode transmitter in the F-16 fire-control radar.
- This briefing addresses the following:
  1. What is the status, including any cost savings, of the Air Force's public-private partnership program for repair of the dual-mode transmitter in the F-16 fire-control radar?
  2. How, if at all, is this type of partnership applicable to the maintenance of fire-control radars for other military services' aircraft?

## Scope and Methodology

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To address our objectives, we reviewed

- DOD policy and guidance on public-private partnerships;
- the partnering agreement (August 2008) and its implementing agreement (August 2011) for repair of the dual-mode transmitter in the F-16 fire-control radar;
- the business case analysis for the F-16 partnership (April 2011); and
- previous reports on public-private partnerships by GAO and other agencies, such as the DOD Inspector General's Office, to identify historical information on the various types of partnerships.

We also interviewed officials regarding the establishment of public-private partnerships for maintenance and repair of the radar in their respective aircraft at

- Ogden Air Logistics Complex, F-16 Systems Program Office, Hill Air Force Base, Ogden, Utah;
- F-15 System Program Office, Wright-Patterson Air Force Base, Dayton, Ohio; and
- F/A-18 Program Office, Naval Air Systems Command, Patuxent River, Maryland.

## Scope and Methodology (cont.)

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- We also interviewed a Director at the Office of the Deputy Assistant Secretary of Defense, Maintenance Policy and Programs, the Pentagon, Washington, D.C., regarding guidance and policy for establishing partnerships as well as the public-private partnerships for the F-16 and various other aircraft.
- We obtained technical comments from DOD, which we incorporated as appropriate.

## Background

- In response to DOD policy,<sup>3</sup> the Air Force conducted a business-case analysis in 2011, prior to establishing the implementation agreement for the public-private partnership. The analysis
  - concluded that with projected decline in work due to retirement of the F-16, the partnership work would help to maximize the use of the repair facility while ensuring that the artisans repairing the dual-mode transmitter remain proficient, and
  - projected that the additional work has the potential to generate up to an additional \$1.47 million of revenue per year for the repair facility at Ogden and an associated reduction in the cost of operations and maintenance for all customers, rendering a cost savings of up to about \$300,000 for those customers.
- Additionally, according to officials at the Ogden Air Logistics Complex, the partnership offers significant value to foreign military sales customers that include
  - reduced lead time for repair of the dual-mode transmitter, and
  - better quality repair.

<sup>3</sup> Department of Defense Instruction 4151.21, *Public-Private Partnerships for Depot-Level Maintenance* (Apr. 25, 2007)





## **Objective 1: The Air Force's F-16 Partnership for the Dual-Mode Transmitter Has Not Resulted in Repair Activity or Cost Savings**

- According to Ogden Air Logistics Complex officials, the partnership has not resulted in repair activity since its implementing agreement was established in August 2011; therefore, DOD and the Air Force have no cost savings to report.
- These same officials stated that foreign military sales customers have not yet taken advantage of the partnership because (1) they are loyal to their current repair arrangements, and (2) some countries have lengthy processes for procurement and funding for repairs that discourage them from seeking new repair arrangements under the partnership.
- However, Ogden Air Logistics Complex officials told us that, in early 2014, two foreign military sales countries expressed interest in utilizing the partnership for repairs, and one of these countries may send workload this fiscal year.

## Objective 2: DOD Has Formed or Planned Other Public-Private Partnerships for Aircraft Radar Repairs

- The direct-sale type of partnership used by the Ogden Air Logistics Complex for the dual-mode transmitter has been used for other services and commodities including aircraft radar.
- DOD has formed such direct-sale public-private partnerships for the maintenance of the fire-control radar of at least two other fleets of U.S. aircraft and, according to officials, is considering forming a new partnership for a third type of aircraft.
- DOD has applied direct-sale, public-private partnerships to the fire-control radar in other aircraft in the past.<sup>4</sup> For example:
  - In 1999, the Navy established a public-private partnership for repair of its F-14 fire-control radar.
  - In 2002, the Navy established a public-private partnership for, among other things, repair of an older version of its F/A-18 fire-control radar.<sup>5</sup>
- Also, according to F-15 program officials, the Air Force is in the early stages of considering establishing a public-private partnership for the repair of its F-15 fire-control radar.
- Although the F-16 partnership agreement has resulted in no repair activity or cost savings to date, according to a Director in the Office of the Deputy Assistant Secretary of Defense for Maintenance Policy and Programs, it contains many of the best practices that DOD seeks to promote. For example, the partnership would help to maximize the use of Odgen's F-16 dual-mode transmitter repair facility.

<sup>4</sup>GAO, *Depot Maintenance: Public-Private Partnerships Have Increased, but Long-Term Growth and Results Are Uncertain*, GAO-03-423 (Washington, D.C.: Apr. 10, 2003).

<sup>5</sup>These partnerships were formed for repair of the U.S. fleet of F-14 (no longer in use) and F/A-18 fire-control radars.



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